

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (currently amended) A server of a local area network in which the server is connected to a terminal via a communication line selected from a plurality of communication lines, the server comprising:
 - a buffer for cumulating a predetermined quantity of latest transmission or reception data in each communication line for each MAC address that is unique to the communication line; and
 - a switch processing portion for performing a switching process of the plurality of communication lines, including
 - a switch request receiving portion for receiving from the terminal a request to switch the communication line and an address in the buffer indicating data received by the terminal,
 - a line selecting portion for selecting an appropriate communication line in response to the request to switch the communication line,
 - a switch instruction transmitting portion for transmitting an instruction to switch to the selected communication line and the address in the buffer indicating data received by the server, and
 - a data destination switching portion for transferring packet data received for the terminal to the communication line, after the switching, by rewriting a MAC address of packet data received and stored before the switching and a MAC address of packet data to be received after the switching, and by copying both the packet data to a buffer area of a MAC address corresponding to the communication line after the switching.
2. (previously presented) A server as recited in claim 1, further comprising a line performance measuring portion for measuring a performance of each of the plurality of communication lines including a communication speed, wherein the line selecting portion selects the appropriate communication line in accordance with measurement result of the line performance measuring portion.

3. (previously presented) A server as recited in claim 2, wherein the line performance measuring portion measures performances including communication speeds of the plurality of communication lines when the switch request receiving portion receives the request to switch the communication line from the terminal.

4. (previously presented) A server as recited in claim 1, further comprising a terminal operation state monitoring portion for monitoring an operation state of the terminal, wherein the terminal operation state monitoring portion transmits a predetermined instruction to the terminal and if there is no response from the terminal in a predetermined period, the terminal operation state monitoring portion informs an application of the fact about no response.

5. (currently amended) A server as recited in claim 1, further comprising a line management portion for detecting communication lines that each of ~~the~~a plurality of terminals uses for connecting to the server and traffics of the communication lines, wherein the line selecting portion selects the appropriate communication line in accordance with detection result of the line management portion.

6. (previously presented) A server as recited in claim 5, wherein the switch processing portion issues a line switching instruction to a terminal except the terminal that transmitted the request to switch the communication line in accordance with the detection result of the line management portion so as to perform a switching process of the communication line, and allocates a communication line that has become free by the switching process to the terminal that transmitted the request to switch the communication line.

7. (currently amended) A terminal of a local area network in which the terminal is connected to a server via a communication line selected from a plurality of communication lines, the terminal comprising:

a buffer for cumulating a predetermined quantity of latest transmission or reception data in each communication line for each MAC address that is unique to the communication line;

a cable mate detecting portion for detecting a mating or unmating state of a communication cable; and

a switch processing portion for performing a switching process of the plurality of communication lines, including

a switch requesting portion for transmitting to the server a request to switch the communication line and an address in the buffer indicating data received by the terminal in accordance with a predetermined instruction including a signal from the cable mate detecting portion,

a switch instruction receiving portion for receiving a switch instruction transmitted from the server and the address in the buffer indicating data received by the server, and

a switch executing portion for executing the switching to the communication line designated by the switch instruction and for synchronizing the contents of the buffer of the terminal with that of the server in accordance with the address in the buffer received from the server.

8. (currently amended) A line switching system of a local area network in which a server is connected to a terminal via a communication line selected from a plurality of communication lines, wherein the server comprises:

a buffer for cumulating transmission or reception data for the latest predetermined quantity in each communication line for each MAC address that is unique to the communication line; and

a switch processing portion for performing a switching process of the plurality of communication lines, including

a switch request receiving portion for receiving from the terminal a request to switch the communication line and an address in the buffer indicating data received by the terminal,

a line selecting portion for selecting an appropriate communication line in response to the request to switch the communication line,

a switch instruction transmitting portion for transmitting an instruction of switching to the selected communication line and an address in the buffer indicating data received by the server, and

a data destination switching portion for transferring packet data received from the terminal to the communication line after the switching, by rewriting a MAC address of packet data received and stored before the switching and a MAC address of packet data to be received after the switching, and by copying both the packet data to a buffer area of a MAC address corresponding to the communication line after the switching, and the terminal comprises:

a buffer for cumulating a predetermined quantity of latest transmission or reception data in each communication line for each MAC address that is unique to the communication line;

a cable mate detecting portion for detecting mating or unmating state of a communication cable; and

a switch processing portion for performing a switching process of the plurality of communication lines, including

a switch requesting portion for transmitting to the server a request to switch the communication line and the address in the buffer indicating data received by the terminal in accordance with a predetermined instruction including a signal from the cable mate detecting portion,

a switch instruction receiving portion for receiving a switch instruction transmitted from the server and an address in the buffer indicating data received by the server, and

a switch executing portion for executing the instruction to switch to the communication line designated by the switch instruction and for synchronizing contents of the buffer of the terminal with that of the server in accordance with the address in the buffer received from the server.

9. (previously presented) A line switching system as recited in claim 8, wherein at least one of the server and the terminal further comprises a line management portion for memorizing a variation of a communication speed when the communication line was switched and for reading out the memorized variation of the communication speed so as to inform an application when the switching occurs.

10. (previously presented) A line switching system as recited in claim 8, wherein when the switching of the communication line occurs, a first communication line is allocated to a communication from the server to the terminal, while a second communication line other than the first communication line is allocated to a communication from the terminal to the server.

11. (previously presented) A line switching system as recited in claim 8, wherein the request to switch the communication line transmitted from the terminal includes a candidate for the communication line to be used after the switching, and the line selecting portion in the switch processing portion of the server selects the communication line included in the request to switch the line from the terminal as an appropriate communication line.

12. (previously presented) A method of switching a communication line, comprising:
accumulating data in a buffer having an address for an active communication line; and
transferring said data at said address in the buffer over a candidate communication line
after switching to said candidate communication line.